Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
GENERAL	COMMENTS			
1	General	Forsythe, US Fish & Wildlife	In general I found the document to be satisfactory and sufficient for its intended purpose.	No citation needed.
2	General	Forsythe, US Fish & Wildlife	More discussion/clarification needs to be provided for the initial COPEC selection (e.g., facility processes and possible inputs).	See Section 3.3, Pages 3-3 through 3-5.
3	General	Forsythe, US Fish & Wildlife	More discussion/clarification needs to be provided justifying the frequency (statistically based) and location of samples (are they sufficient to define nature and extent).	See Sections 6.1.2, 6.2.2, and 6.2.3; Pages 6-8 through 6-10 and 6-12 through 6-17.
4	General	Sarah Schreier, TCEQ	Possible groundwater contamination does not appear to be addressed in this work plan. A site-wide Groundwater Affected Property Assessment Report (APAR) that has been submitted to TCEQ shows that the contaminant plume from the active Huntsman plant intersects the East-West trending portion of Star Lake Canal. TCEQ is concerned that this groundwater plume could be in communication with the surface water that we are investigating and could represent a continuing source of contamination. We need data collected to prove or disprove this potential communication.	See Sections 2.0 and 6.6, Pages 2-5, 2-6, 6-22 and 6-23. See Figures 2-4 through 2-9 and Figure 6-5.
5	General	Larry Champagne, TCEQ Remediation Division	It appears that all proposed samples will be collected from the area of interest and none from background locations. It is understood that background samples should not be used to screenout COPECs in the EPA risk assessment process. However, background samples would contribute to the site characterization and should be collected.	See Sections 2.0 and 6.12, Pages 2-1 through 2-6 and 6-8 through 6-10. See Figure 2-2.
6	General	Larry Champagne, TCEQ	It is inappropriate to identify intermittently inundated matrix within Molasses Bayou as "wetland soil" based solely on the rationale (I.e., periodic inundation) provided. According to this logic, all intertidal areas with active sediment-based ecological communities would be "soil based." All matrix material within Molasses Bayou should be categorized as sediment unless more comprehensive rationale regarding duration of inundation, in conjunction with assemblages of flora and faunal indicator species, can be provided. Similar clarification should also be provided for any bank or remnant dredge material described as "soil."	
7	General	Larry Champagne, TCEQ Remediation Division	In order to eliminate a threatened/endangered species as being potentially present, an ERA should provide supporting documentation from a wildlife management agency to confirm the absence of the protected species on the site and/or include a convincing discussion of the lack of suitable habitat. It is not enough to simply state that no protected species are known to occur at a site. This is different from a statement that none are expected to occur based on the available habitat and the needs of a threatened/endangered species, particularly if this is supported by testimony from a local expert (e.g., academia). In no cases should a lack of visual observation of a protected species on the site be a sufficient justification alone. Although some discussion of suitable habitat and needs was provided, several species were eliminated based on the lack of observation. Also see related specific comments.	
8	General	Larry Champagne, TCEQ Remediation Division	It is stated that sediment data from prior TCEQ investigations was not usable for either nature and extent or risk assessment purposes because detection limits exceeded ecological screening benchmarks. However, it seems logical to utilize these data to assist in the identification of site COPECs and the determination of future sample locations, particularly where higher concentrations of COPECs were observed. Although this utilization is somewhat implied, it is not specifically stated. Please ensure that these data are to be used in this manner and revise the text accordingly to indicate that this data is not to be disregarded entirely for the Remedial Investigation (RI).	

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
9	General	Shewmake, USEPA Ecological Risk Assessor	The references to ARARs on pages 1-10, 2-2, 3-3 also should be modified.	See Section 1.5, Page 1-10.
10	Section 6	Sarah Schreier, TCEQ	Section 6, Sampling and Analysis Plan. Is GPS location adequate for future use of the sampling data, or will the sample locations need to be surveyed after sample collection? If a need for a survey is anticipated, then marking sample locations for the survey should be included in this plan. In general, please discuss the logic and reasoning used to set sample quantity and distribution (I am not looking for a statistics answer here - just documentation of the thought process). Discuss areas that have less coverage and what reasoning led to the decision not to sample in those areas. Several areas seem devoid of samples in Molasses Bayou, and Star Lake Canal and Gulf States Canal seem to have lower sample location densities than Molasses Bayou and Jefferson Canal. Please explain the reasoning.	See Sections 6.1.2, 6.2.2, and 6.2.3; Pages 6-8 through 6-10 and 6-12 through 6-17.
11	Section 7	Sarah Schreier, TCEQ	Section 7, Schedule. Were physical site access restrictions caused by vegetation density, and likelihood of heat and faunal related Health & Safety concerns considered when selecting projected dates for field work?	See Section 7.0. Also addressed in the Health and Safety Plan, Appendix B.
SPECIFIC	COMMENTS; Section	n 1, Introduction		
12	WP, Page 1-2, § 1.2, Site Characterization	Forsythe, US Fish & Wildlife Service	At this point groundwater has not been discussed (previous studies) and thus should be listed as a media of concern. Alternatively, the sentence could be changed to read, "abiotic media (surface water, sediment, soil, groundwater)."	See Sections 2.0 and 6.6, Pages 2-5, 2-6, 6-22 and 6-23. See Figures 2-4 through 2-9 and Figure 6-5.
13	WP, Page 1-2, § 1.2, SLERA	Forsythe, US Fish & Wildlife Service	There should be some revision to reflect that the objective of the SLERA is to "use site-specific data," not necessarily requiring new sampling (at this point in the document).	See Section 1.2, Page 1-2.
14	Section 1.2, page 1-2	Larry Champagne, TCEQ Remediation Division	TCEQ's ecological risk assessment guidance should also be listed under the potential SLERA guidance.	See Section 1.2, Page 1-3.
15	Page 1-3		Please reference applicable TRRP guidance in the list under Tier 1 Human Health Risk Assessment. Sufficient data must be collected to run a parallel path risk assessment under TRRP to determine whether there are specific chemicals of concern (COCs) on this site for which TRRP provides more stringent criteria. (TRRP Guidance Numbers 19, 21, 22, 24, 25, 27 should be considered.)	See Section 1.2, Page 1-3.
16	Page 1-7, Section 1.4.4	Shewmake, USEPA Ecological Risk Assessor	This section refers to Exhibits that I could not locate in this document.	See Exhibits in revised Work Plan.
17	Section 1.4.4	Sarah Schreier, TCEQ	Consider adding a spot on one of the maps where the Rainbow Bridge Station is located.	See Figure 1-2, Page 1-6.
18	Figure 1-1.	Sarah Schreier, TCEQ	Please add TCEQ to the organizational chart.	See Figure 1-1, Page 1-4.
19	Page 1-6, Figure 1-21	Shewmake, USEPA Ecological Risk Assessor	How was the area described as "area of potential concern" in figure 1-21 determined? It appears in this figure that the area is connected to other waterways. Is there a reason to believe that significant amounts of contamination could not have been transported to other areas? Why isn't the area where Star Lake Canal joins the Neches River included? What are the boundaries of this site? All of this information needs to be presented in this document.	See Section 1.4.1, Pages 1-5 and 1-6. See Figure 1-2.
20	Page 1-6, Figure 1-21	Shewmake, USEPA Ecological Risk Assessor	The picture in Figure 1-21 is good, but we need additional close-up maps showing details like where dredged sediments were deposited, where the solid waste landfill is, tributaries, outfalls, other water bodies and property lines.	See Figures 2-1, 2-2, and 2-3.

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
21	Page 1-7, Section 1.4.5	Shewmake, USEPA Ecological Risk Assessor	It is not clear from the background information and site description if all of the locations where dredged sediments were placed on the banks of the canals are known. If all of these locations are not known then locating these dredged sediments, and runoff from them should be one of the goals of this remedial investigation.	See Sections 2.0 and 6.2.3, Pages 2-1 through 2-6, 6-16, and 6-17. See Figure 2-2.
	Section 2, Historical	Data		
22	Page 2-1, 3rd bullet	Sarah Schreier, TCEQ	Please update this with information from the site-wide groundwater APAR that was submitted to TCEQ Corrective Action Program. Include a figure that shows the well locations and compliance points referenced here. Please indicate review status (i.e., under review, or approved by TCEQ) of any corrective action reports referenced.	See Sections 2.0 and 6.6; Pages 2-5 through 2-12, 6-22, and 6-23. See Figures 2-4 through 2-9 and 6-5.
23	Page 2-2, 4th bullet	Sarah Schreier, TCEQ	Please indicate what the public health assessment concluded about all exposure pathways evaluated.	See Section 2.0, Page 2-5.
24	WP, Page 2-2, § 2.0, Public Health Assessment	Forsythe, US Fish & Wildlife Service	The summary provided indicates that the exposures evaluated were consumption of fish, drinking water, and incidental ingestion of sediments and surface water. However, the concluding statement says, "groundwater does not pose a risk." What were the results for the other exposure pathways?	See Section 2.0, Pages 2-5 and 2-6.
25	Section 2.1	Sarah Schreier, TCEQ	Please include a tabular listing of all benchmarks used for comparison to historical data, and their sources. TCEQ historical data should be qualitatively useful for those data points that showed detections. At a minimum, those sample locations where TCEQ had detections should be resampled to obtain data of appropriate quality level for the intended use. Do not discount historical data that shows contaminants present.	See Section 2.1, Page 2-6.
	Section 3 Screening-	Level Ecological Risk Ass	sessment	
26	WP, Page 3-1, § 3.1, SMDP Outcomes	Forsythe, US Fish & Wildlife Service	Suggest using the terms, "acceptable risk, indeterminate risk, and unacceptable risk."	See Section 3.1, Page 3-1.
27	WP, Page 3-3, § 3.3	Forsythe, US Fish & Wildlife Service	It appears as though the COPEC selection criteria, as explained here, is actually the exercise to be performed in Step 2 of the risk assessment process. It would be prudent to include a discussion here or prior (site history) detailing the facility processes and constituents associated with current/past operations; which may have been discharged and contributed to any contamination. An example that makes this apparent is the listing of pentachlorophenol (PCP) as a COPEC, without also listing the known contaminants of that product (dioxins/furans) that may also be present. In addition in this section mercury is described as an "inorganic" bioaccumulative. The form of mercury, methyl mercury, that is of bioaccumulative and biomagnification concern is actually an organic.	See Sections 1.4.5 and 2.0; Pages 1-8, 1-9, and 2-1 through 2-12.
28	WP, Page 3-3, § 3.4, Threatened and Endangered Species	Forsythe, US Fish & Wildlife Service	Special status species should also be considered in the evaluation of receptors of concern if critical habitat for such species is documented to exist at the site.	See Section 3.4, Page 3-5.
29	WP, Table 3-2, Threatened and Endangered Species	Forsythe, US Fish & Wildlife Service	The Piping Plover (Charadrius melodus, E,T) is currently listed on the USFWS website for Jefferson Co Also, the Bald Eagle and Brown Pelican are federally listed species.	See Section 3.4.1, Page 3-9.

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
30	Section 3.4.1, page 3-6	Larry Champagne, TCEQ	Please revise Table 3-2 to show the brown pelican as a federal endangered species. This species is still listed as endangered on the Texas Gulf Coast although it may not be included in the Jefferson County list.	See Section 3.4.1, pages 3-6 and 3-9.
31	Section 3.4.1, page 3-8	Larry Champagne, TCEQ Remediation Division	likely to use this area and the surrounding areas for feeding or loafing. Also, the justification	See Section 3.4.1, Pages 3-6, 3-7, 3-9, and 3-10.
32	WP, Page 3-8, White- faced Ibis		Not sure that the rationale for eliminating further evaluation for this species is sufficient. If they are common to the county and area (as stated), but just have not been documented at the site (by TPWD), they should be retained since preferred habitat exists.	See Section 3.4.1, Pages 3-7, 3-9 and 3-10.
33	WP, Page 3-8, § 3.4.2	Forsythe, US Fish & Wildlife Service	Can the observation of the muskrat be confirmed? Is it possible that it was a nutria?	See Section 3.4.2, Page 3-10.
34	Section 3.4.2, page 3-9	Larry Champagne, TCEQ Remediation Division	Site Specific Receptors of Concern and Figure 3-3. In order to maximize exposure, it is preferred that a green heron or other smaller-bodied shorebird be used in place of the great blue heron.	See Section 3.4.2, Page 3-10.
35	Section 3.4.2, page 3-9	Larry Champagne, TCEQ	Site Specific Receptors of Concern. The characterization of the muskrat exposure is incorrect. Muskrats are primarily aquatic animals, burrowing into the sediments of marshes or river banks or shorelines. They feed primarily on aquatic vegetation. Therefore they will be exposed to contaminants primarily through aquatic vegetation, surface water, and sediments, not soil as indicate. Please revise accordingly.	See Section 3.4.2, Pages 3-10 and 3-14.
36	Section 3.4.2, page 3- 9	Remediation Division	Site Specific Receptors of Concern and Figure 3-3. The characterization of the raccoon exposure is incorrect. The raccoon feeds on aquatic prey (fish and benthic invertebrates) in addition to terrestrial prey. Thus its exposure to sediments needs to be evaluated in addition to its exposure to surface water and soil, both from incidental ingestion and from food chain transfer.	See Section 3.4.2, Pages 3-3, 3-11, 3-14, and 3-15.
37	Section 3.4.2	White, NOAA	Site Specific Receptors of Concern, pg. 3-9. In order to conservatively assess the potential risk to receptors exposed to contaminants (which are likely to be primarily associated with sediments), I suggest modifying some of the receptors under consideration. Please substitute the green heron for the great blue heron (which is likely to be more conservative due to smaller body weight). Also consider adding sediment probing shore birds such as the spotted sandpiper or piping plover.	See Section 3.4.2, Pages 3-7, 3-10, 3-14, and 3-15.
38	WP, Page 3-10, § 3.5, ARARs	Forsythe, US Fish & Wildlife Service	For soils, suggest inclusion of EPA's EcoSSL's	See Section 3.0, Page 3-11.
39	Section 3.5, page 3- 10	Larry Champagne, TCEQ Remediation Division	This appears to contradict the statement made on n. 2-2 regarding the use of FR.I.s. Please	See Section 3.5, Page 3-11.

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
40	Section 3.6.1, pg. 3- 11, pg. 3-12 and Figure 3-2	Larry Champagne, TCEQ Remediation Division	The pathway from bank soil to mammals is identified as potentially complete but not evaluated. High percentages of incidental soil ingestion by raccoons and other mammals could be a significant part of the exposure, particularly if these soils (having originated from dredged sediments) house the highest COPEC concentrations. This pathway should be evaluated. There is also disagreement with the figure and the statement that "exposure of shorebirds and waterfowl to constituents in bank soil is shown as an incomplete pathway as these receptors are not expected to utilize this habitat." Depending on the definition of bank soil (see below), shorebirds and waterfowl may utilize this habitat when it is inundated. Since this deposited dredge material is a known source of contamination and risk, potential exposure of all appropriate receptors should be assessed.	See Section 3.6.1, Page 3-12. See Figure 3-2.
41	Section 3.6.1, pg. 3- 12	Remediation Division	The characterization of wetland soil is not acceptable based on the rationale provided. Periodic inundation is common to many sediment-dominated environments such as intertidal estuarine and lacustrine marshes. The definition for matrix type should be based on common technical usage not unique to or limited to this RI. The document needs to clearly identify upland soil, bank soil, wetland soil, and sediment using standard definitions. As discussed below, the current distinction between sediment and wetland soil in this RI is problematic.	
42	Section 3.6.1, Figure 3-3	Larry Champagne, TCEQ Remediation Division	wetlands as soil since it is "only periodically inundated," whereas sediments are defined as being "permanently inundated." USFWS defines wetlands and their substrates as the following: "Wetlands are lands transitional between torrestrial and aquatic systems where the water table.	See Section 3.6, Pages 3-12 through 3-17. See Figure 3-3.
			Substrate that occurs along the banks of these water bodies and under wetland vegetation should be considered sediments and treated as such. Receptors foraging in these areas should be examined for sediment exposure and COPECs present in this substrate should be evaluated against sediment benchmarks. Please revise the RI to more accurately describe the matrix prevalent in Molasses Bayou marsh and adjacent water bodies.	See Section 3.6.2, Page 3-14 and 3-15.
43	Section 3.6.1	White, NOAA	Exposure Pathways, pg. 3-12. The distinction between sediment and wetland soil in this RI is problematic. Wetland soils should be considered sediment.	See Section 3.6, Pages 3-12 through 3-17.
44	WP, Page 3-9	Forsythe, US Fish & Wildlife Service	Suggest using a wading bird of smaller size, such as the green heron or snowy egret. Please explain the selection of the mottled duck beyond having been observed. Will enough literature data be available to actually model exposure/effects to this species? Suggest replacing with the more commonly used (and data rich) dabbling duck, the mallard.	See Section 3.4.2, Page 3-10.
45	WP, Figure 3-2, CSM	Forsythe, US Fish & Wildlife Service	It appears that the sediments are the original source of contaminants, as depicted. This figure should be revised to include the "true" original sources (facilities) via 'end of pipe discharge' and/or contaminated soil erosion/runoff.	See Figure 3-2.
46	WP, Page 3-12, § 3.6.1	Forsythe, US Fish &	If taken as stated, then receptors' exposure will be only modeled for mid-channel sediments. When in fact, many of the selected ROCs will be utilizing the shoreline, which as defined in the document, are not sediments (permanently covered with water).	See Section 3.6.1, Page 3-12.

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
47	WP, Page 3-12, § 3.6.1, Potentially Complete	Forsythe, US Fish & Wildlife Service	mammals. If the areas are significant enough to be used in modeling exposure to the marsh wren, then they should also be used for mammals.	See Section 3.6.1, Page 3-12. See Figure 3-2.
48	WP, Page 3-12, § 3.6.1, Incomplete	Forsythe, US Fish & Wildlife Service	Do not agree that shorebird exposure to bank soils is incomplete. At a minimum, as described, the erosion of these areas put them in direct contact with areas shorebirds will utilize for foraging. So, the exposure may be minimal (potentially complete) if these areas are small, but could also be significant if providing habitat for prey.	See Figure 3-2.
49	WP, Page 3-14, 2nd	Forsythe, US Fish & Wildlife Service	Bank soils should be added to the list of media where the maximum concentrations are compared to screening levels/benchmarks and/or TRVs, as appropriate.	See Sections 3.5 and 3.6.2, Pages 3-11 and 3-14.
50	Section 3.6.1 Pg. 3-14	Larry Champagne, TCEQ Remediation Division	The text identifies wetland soils in reference to measurement endpoints. See applicable comments above.	See Section 3.6.1, Page 3-12 (modified throughout document).
51	WP, Page 3-15	Forsythe, US Fish & Wildlife Service	Bioconcentration factor is abbreviated, "BCF", not BAF (bioaccumulation factor). Depending on how it was intended, BAF may actually be more appropriate for this situation. In addition, suggest replacing "no risk" with the phrase, "acceptable risk." The data and level of investigation will not be definitive enough to make the statement that "no risk" exists.	See Section 3.6.2, Page 3-14.
52	Section 3.5	Shewmake, USEPA Ecological Risk Assessor	Section 3.5 of the work plan needs to be re-written, removing all references to ARARs, and should instead should focus on establishing the screening benchmarks that will be used. This section as currently written implies that ARARs and screening benchmarks are the same thing. ARARs can be used as benchmarks but ARARs are regulations and benchmarks are not. ARARs are considered when establishing remedial goals but are not part of the ERA.	See Section 3.5, Page 3-11.
53	Section 3	Shewmake, USEPA Ecological Risk Assessor	When establishing a hierarchy for the selection of ecological benchmarks, Texas chronic WQS should be considered before NAWQC.	See Section 3.5, Page 3-11.
54	Section 3.3, page 3-3	Shewmake, USEPA Ecological Risk Assessor	Page 3-3, Section 3.3: The section on selection of COPEC's should also state that all PAHs detected would be retained if any one detected PAH exceeds a screening level.	See Section 3.3, Page 3-3.
55	Section 3.5	Shewmake, USEPA Ecological Risk Assessor	As this site is in Texas the easiest way to establish benchmarks would be to follow the TCEQ guidance (RG-263 section 3.5), because it sites all of the references used in the draft RI section 3.5 and follows the same general outline used to establish benchmarks. It would also make it easier to compile and check the values that are used.	See Section 3.5, Page 3-11.
56	Section 3.4.1, page 3- 6	Shewmake, USEPA Ecological Risk Assessor	Page 3-6, Section 3.4.1: There should be more supporting documentation in order to justify the decision not to classify endangered species as a ROC. The preferred documentation is a statement from US Fish and Wildlife Service.	See Section 3.4.1, Pages 3-6 through 3-10.
57	Figure 3-2, page 3-11	Shewmake, USEPA Ecological Risk Assessor	Page 3-11, Figure 3-2: In the conceptual site model the path from bank soil to shorebirds, waterfowl, and mammals is shown as incomplete or potentially complete. This pathway would probably be complete unless there is a site-specific reason that exposure is not possible. Please explain why these pathways are shown as incomplete.	See Section 3.6.1, Pages 3-12 through 3-14.
58	Section 3.6.1, page 3-12	Shewmake, USEPA Ecological Risk Assessor	Page 3-12, Section 3.6.1: Describing the area affected by dredged sediments as "comparatively small compared to the overall size of the site" is not sufficient to show that there is no pathway from the contaminants to mammalian receptors. The site is large and comparatively small could mean anything.	See Section 3.6.1, Pages 3-12 through 3-14.

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
59	Section 3.6.1, page 3-12	Shewmake, USEPA Ecological Risk Assessor	On page 3-12, Section 3.6.1 it states that, for this risk assessment, the use of the word sediment will be limited to include only substrates that are permanently submerged and that substrates that are intermittently submerged will be classified as wetland soil. If wetland soil is going to be evaluated separately then how is it going to be evaluated (soil, sediment or both)? It may be appropriate to evaluate terrestrial receptors against soil and aquatic receptors against sediment. This all depends on how frequently the area is inundated. The methods used to evaluate wetland exposure need to be explained.	See Section 3.6.1, Page 3-12 (modified throughout document).
	Section 4			
60	WP, Page 4-1, § 4.1, Problem Formulation	Forsythe, US Fish & Wildlife Service	Suggest using the term "refinement" of COPECs rather than "elimination."	See Section 4.1, Page 4-1.
61	WP, Page 4-1, § 4.1, Risk Management		Should include that preliminary remediation goals (PRGs) will be calculated and used to guide risk management decisions.	See Section 4.1, Page 4-1.
62	WP, Page 4-3, § 4.2, 1st sentence	Forsythe, US Fish & Wildlife Service	Suggest changing "reasonable" to "less conservative."	See Section 4.2, Page 4-3.
63	WP, Page 4-5, § 4.6	Forsythe, US Fish & Wildlife Service	Objective is to reduce risks to acceptable levels (PRGs).	See Section 4.6, Page 4-4.
	Section 5, Human He	ealth Risk Assessment (H	HRA)	
64	Section 5.1, Page 5-1	Sarah Schreier, TCEQ	Please be aware that for soils only, the TRRP Rule requires the site assessment to delineate contamination to Tier 1 Residential assessment levels. A commercial/industrial land use may be applied when performing a response action at the site, however, concentrations of COPCs may not exceed residential standards on off-site properties without written landowner concurrence for the associated institutional control. Please be aware that the TCEQ will require the human health screening levels for each COPC to be at least as protective as the Assessment Levels described in TRRP.	See Section 5.1, Page 5-1.
65	Section 5.1, Page 2-2	Sarah Schreier, TCEQ	This section provides general criteria to be used in the development of an initial list of COPCs. It appears that there are differences in some of the criteria outlined in this section and the screening criteria outlined in Section 350.71(k) of the TRRP Rule. Please be aware that the TCEQ will insist that COPCs that do not explicitly meet the screening criteria outlined in 30 TAC §350.71 be retained for further evaluation.	See Section 5.1, Page 5-2.
	Section 6, Sampling	& Analysis Plan		
66	Figure 6.1		This sampling and analysis plan doesn't seem adequate to characterize the dredged sediments placed on the bank of the Jefferson Canal or the runoff from these sediments. From Figure 6.1 it does not look as if any soil sampling is going to occur near Jefferson Canal.	See Sections 6.2.2 and 6.2.3; Pages 6-12 through 6-17. See Figure 6-2.
67	Figure 6.1	Shewmake, USEPA Ecological Risk Assessor	It is difficult to evaluate the sampling plan without more detailed maps and pictures. Figure 6.1 has blurred text in both the electronic and print copies. Larger higher resolution maps should be provided. A map with landmarks, roads, and potential sources of contamination labeled should be provided. It would also be good to have pictures with and without the color enhancement.	See Figures 6-2 through 6-5.
68	Section 6	Shewmake, USEPA Ecological Risk Assessor	This plan does not include any soil sampling from the banks of the canals except in areas where contaminated sediment has been deposited. This sampling plan should include soil sampling on the banks of the canals in areas where elevated water levels could have carried contamination.	See Sections 6.1.2, 6.2.2 and 6.2.3; Pages 6-8 through 6-10 and 6-12 through 6-17. See Figures 6-2 through 6-5.

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
69	Section 6		It would be easier to develop a sampling plan, and describe this site if the site were broken into multiple AOC's with similar characteristics. For example wetlands, canals, and contaminated bank soil. This is a large site to assess as a single area of concern.	See Sections 6.1.2, 6.2.2 and 6.2.3; Pages 6-8 through 6-10 and 6-12 through 6-17. See Figures 6-2 through 6-5.
70	Section 6.1.2, page 6-1	Shewmake, USEPA Ecological Risk Assessor	Page 6-1, Section 6.1.2: The description of the DQO process in this section is not adequate. While the DQO process for a SLERA is abbreviated, the information used to determine the number of samples, and the questions that are being answered by this study should be presented in greater detail.	See Section 6.1.1, Pages 6-1 through 6-8. See Figure 6-1.
			Was a formal Data Quality Objective (DQO) process conducted? This DQO is too vague to be meaningful.	See Section 6.1.1, Pages 6-1 through 6-8. See Figure 6-1.
71	Section 6.1.2		There is an apparent inconsistency between the stated objectives of the Tier 1 Investigation in this Section and in Section 1.1. In this Section, it is stated that the objective includes collection of data adequate to determine nature and extent of contamination, for use in the Screening-Level Ecological Risk Assessment (SLERA), and for use in the Tier 1 HHRA. In section 1.1, the purpose is to collect data to determine the nature of contamination, data for conducting the SLERA, and to determine if an HHRA is necessary. Please clarify.	See Section 6.1.1, Pages 6-1 through 6-8. See Figure 6-1.
			Data collected for extent needs to be adequate to meet the substantive requirements of an Affected Property Assessment as described under 30 TAC §350, and applicable TRRP guidance.	See Section 6.1.2, Pages 6-8 through 6-10.
72	Section 6.2.1	Sarah Schreier, TCEQ	This entire section is inadequate for development of a comprehensive picture of the site.	See Section 6.1.2, Pages 6-8 through 6-10.
73	Section 6.2.1.3, page 6-2	Shewmake, USEPA Ecological Risk Assessor	Page 6-2, Section 6.2.1.3: This section needs to be expanded to cover patterns of drainage from contaminated bank soil and discuss any water bodies connected to the canals. It should also discuss flooding and how tidal flow affects currents in the area. The description of water flow should be adequate to locate all of the areas potentially affected by hydrologic transport of contaminants.	See Sections 6.2.1.3 and 6.2.4; Pages 6-11 and 6-17. See Figure 6-5.
74	Section 6.2.1.5	Sarah Schreier, TCEQ	Quantify "significant depths." At what depth is groundwater used in this area, or is public and the majority of private water supply drawn from surface water?	See Section 6.2.1.5, Page 6-12.
75	Section 6.2.1.6	caracir certificity i care	Cultural Resources typically refer to any artifactural remains over 50 years old, not current recreational use. Please cite your references used to determine that the area was not known to be used by native population, or early Texans.	
76	Section 6.2, pg. 6-2	Larry Champagne, TCEQ Remediation Division	The referenced Appendix D did not appear to be included in the work plan.	The revised Work Plan includes three Appendices and they are attached to the revised Work Plan.
77	Section 6.2.2, page 6-3	Larry Champagne, TCEQ Remediation Division	While sample numbers and locations are discussed in this section, it is unclear what type of sampling design was used for this RI. Samples do not appear to be evenly dispersed through the wetland along Star Lake Canal. There is an inlet area approximately halfway down the length of the canal to the southeast that has no proposed sampling in or near it. This represents a data gap that needs to be addressed. The same situation applies to the pond in the extreme southeast corner of the site. As stated earlier, the text on page 2-2 indicates the existing historical data will be excluded entirely from the RI work and it is unclear if and how historical data may have been utilized in developing the proposed sampling plan. Please address the role of historical data in the current proposed sampling strategy. Also see applicable comments above regarding the term "wetland soil."	See Figures 6-2 through 6-5.

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
78	Section 6.2.2, page 6-3	Shewmake, USEPA Ecological Risk Assessor	Page 6-3, Section 6.2.2: The use of the term wetland soil to describe soil samples from dredged material placed on the banks of the canal is not used consistently throughout these documents. In the CSM (fig 3-2) and food web (fig 3-3) this soil is referred to as bank soil. Unless this soil is part of a wetland or intermittently submerged then it should be referred to as bank soil throughout the entire document. If all of this soil is going to be evaluated as wetland soil and none of the samples are considered bank soil then the CSM, food web, and all references to bank soil in the rest of the document should be modified to reflect this.	
79	§ 6.2.2 Page 6-3,	Forsythe, US Fish & Wildlife Service	To provide additional fate information, suggest collecting the general water quality measurements at the same depth as that of the sample (mid-depth); in addition to the surface.	See Section 6.3.1, Pages 6-17 through 6-19.
80	Section 6.2.2, page 6-3 and pg. 6-6	Larry Champagne, TCEQ Remediation Division	Please elaborate on the purpose of the mid-depth and refusal-depth sediment samples. Also, please discuss how a 6-inch depth will be obtained with a grab sampler when the SOP states that penetration depth will not be more than a few centimeters. Finally, how will the significant differences in sampling methodology between the grab sampler and the vibracore tube (e.g, blow-out from the grab) affect the comparisons of surface samples?	
			Please clarify how "reasonably likely accumulation points" were identified.	See Section 6.2.3, Pages 6-16 and 6-17.
			This work plan in general does not appear to address definition of the extent of contamination. Please revise to address this deficiency.	See Section 6.1.2, Pages 6-8 through 6-10.
81	Section 6.2.3	Sarah Schreier, TCEQ	If it is determined that a groundwater investigation is within the scope of this project, then that needs to be addressed in the sampling plan.	See Section 6.6, Pages 6-22 and 6-23. See Figure 6-5.
			TCEQ has some concern that decontamination procedure for the water samplers as contemplated in this section may not be adequate to guard against cross-contamination.	See Section 6.3.1, Pages 6-17 through 6-19.
82	Section 6.2.3, pg. 6-4	Larry Champagne, TCEQ Remediation Division	The sample point configuration criterion for wetland soils identifies known dredged material banks and wetland areas of accumulated re-suspended sediment and/or erosion materials from the dredge site as the sole factors for sampling. The dredge material reflects the relocation of sediments originally contaminated in-situ. This same deposition that resulted in contaminated sediments within Jefferson Canal is also a potential transport and depositional mechanism that justifies sampling Molasses Bayou. Please include primary deposition of contaminated sediments in the criteria for all of Molasses Bayou. The existing rationale for selection and distribution of samples for the Molasses Bayou matrix, identified within the work plan as "wetland soils," is inadequate. Please include a more detailed explanation. Also see applicable comments above regarding the term "wetland soil."	
83	Page 6-5 , Figure 6-1	Larry Champagne, TCEQ	The central western portion of Molasses Bayou is devoid of samples but shows two consecutive interconnected open water bodies connected to the main channel. These appear to be potential primary sediment depositional areas. Please add a minimum of two samples in this area or provide rationale for omitting this area from sampling. Also see comment above regarding additional clarification on sampling design and data gaps. The sample point configuration criteria references wetland soils. See applicable comments above.	
84	Section 6.2.4	Sarah Schreier, TCEQ	TCEQ seeks reassurance that shipping samples to Pennsylvania for analysis will not pose any logistical problems with staying within sample holding times.	Numerous sites throughout the United States use Lancaster Laboratories, Inc. with no issues.

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
85	Section 6.3.1	Sarah Schreier, TCEQ	It appears that surface water samples will be collected after sediment samples. Are there any concerns about turbidity and suspended sediments in the surface water resultant from the sediment sampling skewing the surface water sample results? A few, but not all of the ecological benchmarks are based on dissolved concentrations. Will both filtered and unfiltered aliquots be collected, and how will they be differentiated in sample labeling? I'd like to see specific samples designated for Matrix Spike/Matrix Spike Duplicate (MS/MSD) in the work plan to ensure that adequate sample volume is collected at those locations. It is critical that site specific MS/MSDs are run to ensure data quality.	See Section 6.3, Pages 6-17 through 6-19. Water always collected prior to sediments in the field.
86	Section 6.4	Sarah Schreier, TCEQ	This section provides a discussion on the locations identified for the collection of sediment samples. It appears that only surface sediment samples are proposed to be collected from the Gulf States Canal and from Molasses Bayou. Please be aware that the detection of COPCs above applicable screening levels in these surface sediment samples may compel deeper sediment samples in this area. Vibracore sampling is described as going to refusal. However, the description of sample segregation of mid depth from refusal depth samples assumes that refusal will be reached at 18 inches. Please clarify what intervals will be sampled as mid depth and refusal depth if refusal is significantly deeper, and if refusal depth is significantly shallower than 18 inches. In the latter case, how will adequate sample volume be assured?	See Sections 6.2.2, 6.2.3, and 6.4; Pages 6-12 through 6-17 and 6-19 through 6-21. See Figures 6-2 through 6-4.
87	Section 6.4	Sarah Schreier, TCEQ	In the discussion on Gulf States Canal and on Molasses Bayou, please briefly discuss the reasoning behind sampling surface sediments only in these locations. Clarify whether surface sediment samples will be collected from vibracore or from grab samples in areas where multiple sample depths are planned. There is an apparent inconsistency in the work plan on this point. Please include the users manual for the vibracore and for the surface water smaller employed in the appendices to the work plan.	t
88	Section 6.4, page 6-6		Page 6-6, Section 6.4: If the sediment is collected in the same location as surface water, and water is collected mid channel then is it possible that the samples could be collected from an area that has been dredged? If dredging is occurring in the canals then this should be considered when selecting locations for sediment sampling. We need to know to location and frequency of dredging to ensure that this sampling plan is adequate.	See Sections 2.0 and 6.0, Pages 2-1 through 2-6 and 6-1 through 6-23. See Figure 2-1.
89	Section 6.4	Shewmake, USEPA Ecological Risk Assessor	The sampling plan should discuss the collection of samples to be used as a background and describe the rational for selecting that location as a background.	See Section 6.1.2, Pages 6-8 through 6-10.
90	Section 6.4	Shewmake, USEPA Ecological Risk Assessor	Please clarify and give rationale for the proposed sample numbers. Was some statistical evaluation of the needs performed? Also, from the text it appears that all of the samples would be considered biased, or at best, haphazard. Will this sampling design limit the utility and statistical strength of the investigation?	See Section 6.1.2, Pages 6-8 through 6-10.
91	Section 6.4, pg. 6-7	Larry Champagne, TCEQ	Please provide additional justification of how five sediment samples collected from 14,700 feet of Star Lake Canal (averaging 3675 ft. between locations), four samples from 4600 feet of Jefferson Canal (averaging 1533 ft. between locations), and three samples from 9000 feet of Jefferson Canal (averaging 4500 ft. between locations) will be sufficient to adequately characterize the sediments in these canals.	Additional samples were added. See Section 6.2.2, Pages 6-12 through 6-16. See Figures 6-2 through 6-4.
92	Section 6.5	Sarah Schreier, TCEQ	This section states that surface sediment samples will be collected at 12 locations. The TCEQ assumes this statement to be a typo and the correct number of sediment samples proposed to be collected in wetland soils is 18.	See Section 6.2.2, Pages 6-12 through 6-16.

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
93	§ 6.5 Page 6-6	Forsythe, US Fish & Wildlife Service	The sediment sampling design will probably define the areas most likely to have been impacted, but it's not clear it will provide enough information to define the nature and extent of contamination. Suggest adding sampling locations in the Neches River, both upstream and downstream of the confluence with Star Lake Canal.	See Section 6.1.2, Pages 6-8 through 6-10.
94	§ 6.6 Page 6-6	Forsythe, US Fish & Wildlife Service	Not in agreement that duplicate sediment and soil samples are impossible. They are commonly collected via homogenization of the original bulk sample.	See Section 6.0, Pages 6-1 through 6-23.
	QAPP			
95	QAPP, Section 2.1	Steven Childress, TCEQ	I am unable to locate the project org chart referenced in the first paragraph as Figure 2-1. Please be advised that this org chart is a required QAPP element per Section 3.2.4 of the EPA QA/R-5 document entitled "EPA Requirements for Quality Assurance Project Plans."	
96	QAPP, § 2.4.1.1 Page 2-7	Forsythe, US Fish & Wildlife Service	The sampling design can maximize representativeness via statistical approaches (random, stratified random, etc.), based on current knowledge or estimated variances.	See Section 6.1.2, Pages 6-8 through 6-10.
97	QAPP, § 2.4.1.3 Page 2-10	Forsythe, US Fish & Wildlife Service	As a tier 2 activity, I suggest the collection of fiddler crabs for ecological considerations, rather than the blue crab. The blue crab might be more applicable to the HHRA.	See Sections 3.0, 4.0, and 5.0, Appendix A.
98	QAPP Section 2.4.1.6	Steven Childress, TCEQ	The last paragraph states that the labs will report detected results to the MDL for each sample result and results between the MDL and the reporting limit (RL) will be qualified as estimated with a "J" flag for organics and a "B" flag for metals. If the RL as defined in this QAPP is synonymous with the method quantitation limit (MQL) as defined in the TRRP rule (i.e., the lowest non-zero concentration standard in the laboratory's initial calibration curve based on the final volume of extract or sample weight used by the lab), then the reporting conventions specified in this QAPP will substantively meet the data reporting requirements given in 30 TAC 350.54(h)(l) of the TRRP Rule. If the RL as defined in this QAPP is not synonymous with the MQL as defined above, then the labs will need to modify their reporting conventions in order to fully comply with the data reporting requirements specified in the TRRP Rule.	See QAPP Section 2.4.1.6, Page 2-11.
99	QAPP Section 2.4.1.6	Steven Childress, TCEQ	Again in the "Sensitivity" Section 2.4.1.6, please be advised that 30 TAC 350.54(h)(2) required all non-detected results to be reported as less than the value of the sample quantitation limit (SQL) as defined in the TRRP Rule (I.e., the method detection limit adjusted to reflect sample-specific actions such as dilutions, use of a smaller aliquot for analysis, percent moisture for soil and sediment results, etc.), not the MDL as stated in the last paragraph of this section.	See QAPP Section 2.4.1.6, Page 2-11.
100	Section 2.6.3 Laboratory Records	Steven Childress, TCEQ	RG-366/TRRP-13 regulatory guidance <i>Review and Reporting of COC Concentration Data</i> with the exception of the Laboratory Review Checklist and the laboratory duplicate data. If the laboratory case narrative and associated exception report are sufficiently detailed in documenting any QC nonconformances and problems/anomalies, then the case narrative will	See QAPP Section 2.6.3, Pages 2-12 and 2-13.

Item No.	Reference	Comment made by	Comment	A revision is included in the Revised RI Work Plan Section as cited below.
101	Table 3-1	Steven Childress, TCEQ	In Table 3-1 "Required Sample Containers, Preservation, and Holding Times for Surface Water and Sediment/Soil Samples," the technical holding time for water sample matrices analyzed for TPH by Method TX 1005 is 14 days from extraction to analysis for aqueous samples that have been acid preserved to a pH of less than 2, (not 7 days).	See QAPP Table 3-1 and Page 3-2.
102	QAPP, Page 3-7, Table 3-3	Forsythe, US Fish & Wildlife Service	As a tier 2 activity, I suggest the collection of fiddler crabs for ecological considerations, rather than the blue crab. The blue crab might be more applicable to the HHRA.	See Sections 1.0, 2.0, 3.0, 4.0, and 6.0; Pages 1-11, 3-7, 3-11, 3-15.
103	Section 5.3	Steven Childress, TCEQ	Since the data validation summary report as described in Section 5.3 "Reconciliation with User Requirements" of this QAPP will contain a Usability Assessment portion which will evaluate the usability of the data in terms of meeting the project-specific DQOs, I believe that this "data validation summary report" is comparable in scope to the TRRP-13 Data Usability Summary (DUS) Report deliverable not only in documenting the results of the technical review and data validation but also in evaluating the ultimate usability of the data for the project.	See QAPP Section 5.3, Page 5-4.
	Appendix C, Standar	rd Operating Procedures (SOPs)	
104	SOP for Containers, Preservation, Handling, and Tracking of Environmental Samples Section 3.4, second bullet.	Sarah Schreier, TCEQ	Please revise the work plan text to indicate that in addition to the requirements of the SOP, the chain-of-custody form must include list of analyses to be performed for each sample.	See SOP 003, Page SOP 003-3.
105	SOP for Sediment Sampling Section 3.1.1, item 2.	Sarah Schreier, TCEQ	Please revise the work plan text to indicate that in addition to the requirements of the SOP, GPS coordinates for the sample location must be recorded in the field logbook, when appropriate.	See Section 6.0 of the revised Work Plan.
106	SOP for Sediment Sampling Section 3.2.1, item 8.	Sarah Schreier, TCEQ	Please clarify under what circumstances it is appropriate to collect a composite sample.	No composite samples were ever proposed. This was an incorrect interpretation. See SOP 004.
107	SOP for Sediment Sampling Section 3.4.1, eighth bullet.	Sarah Schreier, TCEQ	Please provide criteria to determine when it is necessary to place core catchers in the end of the core liner.	See SOP 004, Page SOP 004-4.
108	SOP for Sediment Sampling Section 3.4.4 18th and 20th bullet	Sarah Schreier, TCEQ	These bullets describe the procedures for collection of the upper 15 cm of sediment. This is inconsistent with Section 6.4.1 of the Work Plan which states that "the collection of surface sediment samples (0-6 inch depths) will be conducted using a grab sampler, an Ekman or Ponar dredge." In addition, it is not clear in the SOP if any additional procedures are required when collecting sediment samples at depths greater than 15 cm. Please revise the work plan text to clearly describe the sediment sampling protocol at the site, ensuring that the clarifications requested above are addresses, and indicating any points at which the sampling procedures to be used at the site deviate from those described in the SOP.	See SOP 004, Page SOP 004-5.